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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,017	12/19/2001	Guocun Chen	270-3049-U C-I-P	1847

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07/22/2003

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EXAMINER

PIZIALI, ANDREW T

ART UNIT

PAPER NUMBER

1775

DATE MAILED: 07/22/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,017

Applicant(s)

CHEN, GUOCUN

Examiner

Andrew T Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1 and 11-12, it is not clear what a "relatively low pressure" represents.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,879,532 to Foster in view of US Patent No. 6,196,936 to Meckel in view of US Patent No. 6,170,487 to Ishiguro and in view of U.S. Patent No. 6,154,311 to Simmons Jr.

Regarding claims 1-12, Foster discloses an article comprised of a layer of nickel deposited on a substrate (column 4, lines 48-58). Optionally deposited on the nickel layer is a layer of chrome (column 5, lines 16-26). Deposited over the optional chrome layer is a color layer comprised of a refractory metal nitride, a refractory metal alloy nitride, or the reaction products of refractory metal or metal alloy, nitrogen, and oxygen (column 6, lines 65-67, column 7, lines 1-22). Foster fails to mention varying the nitrogen and oxygen content of the reaction

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products of refractory metal or metal alloy, nitrogen, and oxygen to give the color layer the appearance of stainless steel or brushed stainless steel finish.

Meckel discloses refractory metal nitrides, such as chromium nitride and di-titanium nitride, and a refractory metal alloy nitride, titanium aluminum nitride, having the appearance of silver or lustrous gray (column 8, lines 2-15). Silver, lustrous gray and stainless steel colors are essentially the same. Meckel does not mention the nitrogen content of the refractory metal nitrides or the nitrogen content of the refractory metal alloy nitride, but in view of the fact that the refractory metal nitrides and refractory metal alloy nitride both have the appearance of stainless steel, absent evidence to the contrary, they would appear to contain about 5 to about 28 atomic percent nitrogen. It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the percentage of nitrogen content of the color layer of Foster, as disclosed by Meckel, to achieve various conventional faucet finishes such as stainless steel or brushed stainless steel finish, because these finishes are commercially desirable. The examiner takes Official Notice that faucets with the finishes of brass and stainless steel are obvious alternative finishes in the faucet art.

Ishiguro discloses that titanium oxide is generally white in color, but when oxygen is partially lost the color changes to gray or black. Gray and stainless steel colors are essentially the same. It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the percentage of oxygen content of the color layer of Foster, as disclosed by Ishiguro, to achieve various conventional faucet finishes such as stainless steel or brushed stainless steel finish, because these finishes are commercially desirable.

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Foster does not mention a polymer layer, but Simmons Jr. discloses the use of a polymer layer, in place of a nickel layer, in applications such as faucets, to provide improved corrosion resistance and to level substrates by forming a smooth hard surface (column 2, lines 9-45 and column 6, lines 15-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the nickel layer of Foster, with the polymer layer of Simmons Jr., because the polymer layer provides a viable alternative to electroplating in addition to providing corrosion resistance while leveling a substrate by forming a smooth hard surface.

Regarding the deposition of the color layer at a pressure below about 8 millitorr, absent a showing to the contrary, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article in view of the substantially identical method used to produce the article of the prior art. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show obvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

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Regarding claims 4-5, Foster discloses that a layer comprised of refractory metal oxide or refractory metal alloy oxide may be deposited on the color layer (column 10, lines 45-57 and column 11, lines 15-27).

Regarding claims 7-9, Foster discloses that the refractory metal of the color layer, the refractory metal of the layer on the polymer layer, and the refractory metal of the refractory metal oxide layer located on the color layer, may be zirconium, titanium, or hafnium (column 6, lines 52-59, column 7, lines 1-22, column 11, lines 15-27).

Regarding claim 10, it is the examiner's position that the polymer layer of Simmons Jr. is identical to or only slightly different than the polymer layer prepared by the method of the claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show obvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). Simmons Jr. either anticipated or strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with Simmons Jr.

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5. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,879,532 to Foster in view of US Patent No. 6,196,936 to Meckel in view of US Patent No. 6,170,487 to Ishiguro and in view US Patent No. 6,168,242 to Mokerji.

Regarding claims 1-12, Foster discloses an article comprised of a layer of nickel deposited on a substrate (column 4, lines 48-58). Optionally deposited on the nickel layer is a layer of chrome (column 5, lines 16-26). Deposited over the optional chrome layer is a color layer comprised of a refractory metal nitride, a refractory metal alloy nitride, or the reaction products of refractory metal or metal alloy, nitrogen, and oxygen (column 6, lines 65-67, column 7, lines 1-22). Foster fails to mention varying the nitrogen and oxygen content of the reaction products of refractory metal or metal alloy, nitrogen, and oxygen to give the color layer the appearance of stainless steel or brushed stainless steel finish.

Meckel discloses refractory metal nitrides, such as chromium nitride and di-titanium nitride, and a refractory metal alloy nitride, titanium aluminum nitride, having the appearance of silver or lustrous gray (column 8, lines 2-15). Silver, lustrous gray and stainless steel colors are essentially the same. Meckel does not mention the nitrogen content of the refractory metal nitrides or the nitrogen content of the refractory metal alloy nitride, but in view of the fact that the refractory metal nitrides and refractory metal alloy nitride both have the appearance of stainless steel, absent evidence to the contrary, they would appear to contain about 5 to about 28 atomic percent nitrogen. It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the percentage of nitrogen content of the color layer of Foster, as disclosed by Meckel, to achieve various conventional faucet finishes such as stainless steel or brushed stainless steel finish, because these finishes are commercially desirable. The

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examiner takes Official Notice that faucets with the finishes of brass and stainless steel are obvious alternative finishes in the faucet art.

Ishiguro discloses that titanium oxide is generally white in color, but when oxygen is partially lost the color changes to gray or black. Gray and stainless steel colors are essentially the same. It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the percentage of oxygen content of the color layer of Foster, as disclosed by Ishiguro, to achieve various conventional faucet finishes such as stainless steel or brushed stainless steel finish, because these finishes are commercially desirable.

Foster does not mention a polymer leveling layer, but Mokerji discloses the deposition of a polymer leveling layer, on metal substrates such as nickel substrates, to level the surface of the substrate, cover any scratches or imperfections in the surface, and provide a smooth and even surface for the deposition of the following layer, such as a chrome layer (column 1, lines 12-18 and column 2, lines 64-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to deposit a polymer leveling layer on the substrate of Foster, as disclosed by Mokerji, because a polymer leveling layer levels the surface of the substrate, covers any scratches or imperfections in the surface, and provides a smooth and even surface for the deposition of the following layer, such as a chrome layer.

Regarding claims 4-5, Foster discloses that a layer comprised of refractory metal oxide or refractory metal alloy oxide may be deposited on the color layer (column 10, lines 45-57 and column 11, lines 15-27).

Regarding claims 7-9, Foster discloses that the refractory metal of the color layer, the refractory metal of the layer on the polymer layer, and the refractory metal of the refractory

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metal oxide layer located on the color layer, may be zirconium, titanium, or hafnium (column 6, lines 52-59, column 7, lines 1-22, column 11, lines 15-27).

Conclusion

6. The following publication is cited to further show the state of the art:

US Publication No. 2002/0146577

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (703) 306-0145. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5665.



atp
July 1, 2003

Andrew T Piziali
Examiner
Art Unit 1775


DEBORAH JONES
SUPERVISORY PATENT EXAMINER